WHAT IS CLAIMED IS :

1. A composite construction having a material microstructure comprising a plurality of granules that randomly arranged with one another, each granule comprising a first material phase and a second material phase that are each continuous and that each occupy different and distinct regions of the granule, wherein the first material phase comprises a material selected from the group consisting of cermet materials, polycrystalline diamond, polycrystalline cubic boron nitride, and mixtures thereof, and wherein the second material phase comprises a material that is relatively softer than the first material phase, wherein at least a portion of the first and second material phases of each granule are in contact with one another.

2. The composite construction as recited in claim 1 wherein the each granule comprises a centrally positioned core that is formed from one of the material phases, and a shell that surrounds at least a portion of the core and that is formed from the other of the material phases.

3. The composite construction as recited in claim 2 wherein each granule has a cylindrical configuration with the shell disposed concentrically around the core.

4. The composite construction as recited in claim 1 wherein the granule first and second material phases are formed from the same general type of material.

5. The composite construction as recited in claim 1 wherein the material microstructure further comprises a binder phase interposed between the plurality of randomly arranged granules.

6. The composite construction as recited in claim 1 wherein the granule first material phase is polycrystalline diamond, and the granule second material phase is a cermet

selected from the group of carbides, borides and nitrides of the group IVB, VB, VIB, VIIB, and VIII metals and metal alloys of the periodic table.

7. A composite construction comprising a plurality of granules, each granule including:

a first region having a continuous first material phase comprising a material selected from the group consisting of cermet materials, polycrystalline diamond, polycrystalline cubic boron nitride, and mixtures thereof; and

a second region having a continuous second material phase formed from materials that can be the same as or different than the first material phase, the first and second regions being distinct from one another, and being in contact with one another;

wherein the plurality of granules are arranged with one another in random fashion to provide a randomly-oriented microstructure, and wherein the randomly-oriented microstructure is disposed along a working surface of the composite construction.

9. The composite construction as recited in claim 7 wherein the second material phase is relatively softer than the first material phase.

10. The composite construction as recited in claim 7 wherein the granule first region is a centrally portioned core, and the granule second region is a shell surrounding at least a portion of the core.

11. The composite construction as recited in claim 8 wherein the core and shell are each cylindrical in configuration.

12. The composite construction as recited in claim 7 further comprising a continuous matrix binder phase, and wherein the granules are distributed therein.

13. A subterranean drill bit comprising a wear surface formed from the composite construction as recited in claim 7.

14. A composite construction comprising a plurality of combined granules, each granule including:

a continuous polycrystalline diamond phase occupying a first region of the granule; and

a continuous cemented tungsten carbide phase occupying a second region of the granule that is distinct from and in contact with the polycrystalline diamond phase;

wherein the plurality of granules are combined together so that the first and second regions of adjacent granules are randomly oriented with respect to one another.

15. The composite construction as recited in claim 14 wherein each granule comprises a cylindrical structure having a centrally-positioned core and a surrounding shell, and wherein the core is the first region and the shell is the second region.

16. The composite construction as recited in claim 14 further comprising a continuous binder phase, and wherein the granules are disposed therein.

17. A rotary cone subterranean drill bit comprising:

a bit body including at least one journal pin extending from a leg portion of the bit;

a cutter cone rotatably mounted on the journal pin; and

an insert disposed along a surface of the cutter cone, the insert comprising a composite construction positioned along a working surface of the insert, the composite construction having a material microstructure comprising a randomly arrangement of granules, each granule comprising a first and second material phase that are each continuous and that each occupy different distinct regions of the granule, wherein the first material phase comprises a hard material selected from the group consisting of cermet materials, polycrystalline diamond, polycrystalline cubic boron nitride, and mixtures thereof, and wherein the second material phase comprises a material that is relatively softer than the first material phase, and wherein at least a portion of the first and second material phases of each granule are in contact with one another.

18. The drill bit as recited in claim 17 wherein the granule comprises a centrally positioned core that is formed from the first material phase, and a shell in contact with the core that is formed form the second material phase.

19. The drill bit as recited in claim 17 wherein one of the first or second material phases is formed from polycrystalline diamond, and the other of the first or second material phases is formed from a cermet selected from the group of carbides, borides and nitrides of the group IVB, VB, VIB, VIIB, and VIII metals and metal alloys of the periodic table.

20. A method for producing a composite construction comprising:

forming a green-state component having continuous first and second material phases that occupy distinct portions of the component and that are in contact with one another, wherein the first material phase is selected from the group consisting of cermets, polycrystalline diamond, and mixtures thereof, and wherein the second material phase is formed from a material that is relatively softer than the first material phase;

processing the green-state component into a plurality of granules;

arranging the plurality of granules in a random fashion to form a green-state product; and

consolidating and sintering the green-state product at high-temperature, high-pressure conditions to produce a composite construction having a material microstructure comprising the randomly arranged plurality of granules.

21. The method as recited in claim 20 wherein during the step of combining, further comprising dispersing the plurality of granules into continuous binder phase material.